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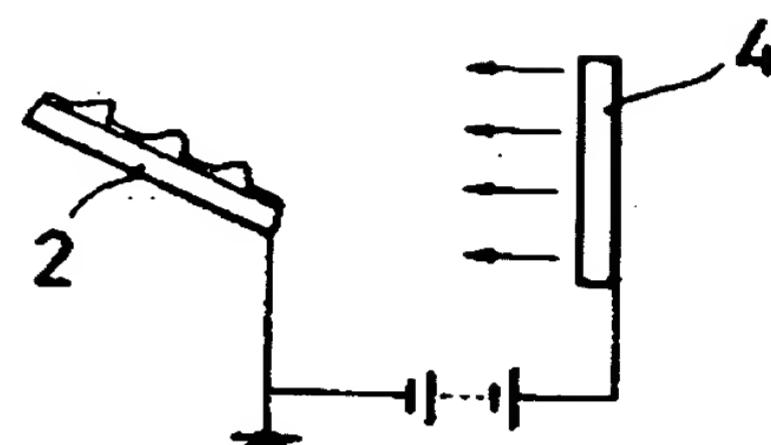
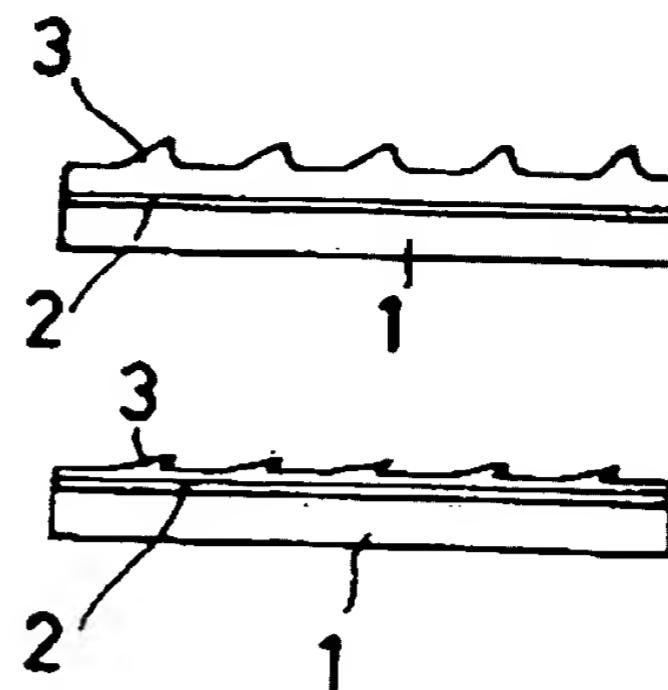
APPLICATION DATE : 25-07-79
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TITLE : PRODUCTION OF LIQUID CRYSTAL
DISPLAY ELEMENT



ABSTRACT : PURPOSE: To produce a liquid crystal display element of good display grade by sputtering ion beams to the orientation film formed on an electrode surface by a diagonal vapor deposition method thereby decreasing the angle of orientation of said orientation film.

CONSTITUTION: Material of SiO or MgF₂ is diagonally evaporated to a substrate 1 provided with an electrode 2, at about 10⁻⁵ Torr degree of vacuum and about 85~89° incident angle to the substrate, whereby an orientation film 3 is formed (the orientation film of superior degree of orientation order S is obtained at about 20~30° orientation angle θ). Next, this is supported with inclination to an ion beam source 4 and is subjected to ion beam etching under conditions of about 10⁻³~10⁻⁵ Torr vacuum degree and about 60~90° incident angle to the substrate, so that the orientation angle θ is made about ≤3°. The electrode plate having the orientation film formed in the above-mentioned manner (small in orientation angle and superior in the degree of order) is particularly suited for liquid crystal display elements of high duty.

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